Listing of Claims:

1. (currently amended) An echo canceler for reducing echoes resulting from a far-end signal and adaptable during a double-talk event, the echo canceler comprising:

an adaptable filter to filter the received far-end signal and provide an echo estimate; and

an adaptation module in communication with the adaptable filter to update the adaptable filter during a double-talk event, the adaptation module to receive a microphone signal and separate a near-end signal from the microphone signal using a blind source separation algorithm.

2. (original) The echo canceler of claim 1, wherein the adaptable filter includes a finite infinite response filter.

3. (original) The echo canceler of claim 1, wherein the echo canceler further includes a preprocessing module in communication with the adaptable filter and adaptation module, the preprocessing module to whiten the far-end signal and decorrelate the microphone signal.

4. (original) The echo canceler of claim 3, wherein the preprocessing module includes,

a first decorrelator to receive and whiten the far end signal, and

a second decorrelator to receive and decorrelate the microphone signal.

5. (original) The echo canceler of claim 3, wherein the preprocessing module includes a recursive least-squares structure.

6. (original) The echo canceler of claim 5, wherein the preprocessing module includes a recursive least-squares systolic array.

7. (original) The echo canceler of claim 5, wherein the preprocessing module includes a recursive least-squares lattice-ladder.

8. (original) The echo canceler of claim 3, wherein the preprocessing module maximizes a criterion of measure to increase the statistical independence of the near-end signal.

9. (original) The echo canceler of claim 8, wherein the criterion of measure is negentropy.

10. (original) The echo canceler of claim 1, wherein the blind source separation algorithm is a gradient negentropy algorithm.

11. (currently amended) A method for reducing echoes resulting from a far-end signal, the method comprising:

receiving a microphone signal including a near-end signal and echoes;

applying a blind source separation algorithm to the microphone signal to separate the near-end signal;

updating an adaptable filter based on the echoes during a double-talk event;

the adaptable filter, filtering the far-end signal to provide an echo estimate; and

applying the echo estimate to a microphone signal to substantially remove echoes.

12. (original) The method of claim 11, wherein the adaptable filter comprises a finite impulse response filter.

13. (original) The method of claim 11, further comprising:

whitening the far-signal; and

decorrelating the near-end signal from the microphone signal.

14. (original) The method of claim 13, wherein whitening the far-end signal is performed by a first decorrelator and decorrelating the near-end signal is performed by a second decorrelator.

15. (original) The method of claim 13, wherein whitening the far-end signal and decorrelating the near-end signal is performed by a recursive least-squares structure.

16. (original) The method of claim 15, wherein the recursive least-squares structure is a recursive least-squares systolic array.

17. (original) The method of claim 15, wherein the recursive least-squares structure is a recursive least-squares lattice–ladder.

18. (currently amended) An echo canceler for receiving a microphone signal including a near-end signal and echoes resulting from a far-end signal, the echo canceler reducing the echoes and adaptable during a double-talk event, the echo canceler comprising:

a preprocessing module to whiten the far-end signal and reduce signal correlation in the microphone signal; and

a blind source separation module, in communication with the preprocessing module and including,

an adaptable filter to filter the whitened far-end signal and provide an echo estimate, and

an adaptation module to update the adaptable filter during a double-talk event and to receive the decorrelated microphone signal and separate the near-end signal from the microphone signal using a blind source separation algorithm.

19. (original) The echo canceler of claim 18, wherein the adaptable filter includes a finite impulse response filter.

20. (original) The echo canceler of claim 18, wherein the preprocessing module includes,

a first decorrelator to receive and whiten the far end signal, and

a second decorrelator to receive and decorrelate the microphone signal.

21. (original) The echo canceler of claim 18, wherein the preprocessing module includes a recursive least-squares structure.

22. (original) The echo canceler of claim 21, wherein the preprocessing module includes a recursive least-squares systolic array.

23. (original) The echo canceler of claim 21, wherein the preprocessing module includes a recursive least-squares lattice-ladder.